D.T.E. 03-121
Attachment NEDGC-4-3 (a)

12/11/98

COMMONWEALTH ELECTRIC COMPANY

CANAL BACKUP STATION SERVICE

Special Contract Pricing Development (Marginal Cost Based)

Distribution Charge

Investment cost	$639,219	Directly Assigned (reflects est. replacement costs)
General Plant Loader	6.86%	Marginal Cost Study, Schedule 10, line 2
Total Investment	$683,069	
Economic Carrying Charge	12.52%	Marginal Cost Study, Schedule 10, line 5
O&M Loader (including A&G)	7.00%	Marginal Cost Study, Schedule 10, line 8 / line 2
Total Carrying Charge	19.52%	
Annual Revenue Requirement	$133,335	
Monthly Revenue Requirement / Unit	$5,600	

Transmission Charge (Marginal Cost Based - Daily Demand)

Annual Cost $/kW	$34.26	Marginal Cost Study, Schedule 10, line 17
Loss Multiplier	1.04339	Marginal Cost Study, Schedule 13
Total	$35.75	
Power Factor Adj,	0.9	Assume 90% Load Factor
Cost - $/kVa	$32.17	
Annual weekdays	260	
Daily Demand Rate - $/kVa	$0.12	
Annual Minimum Charge @ 10%	$3.22	$/kVa

Transition Demand Rate

Transition Charge	$0.03125	$/kwh	Per Divestiture Filing
Demand units	539,000	Kva	
Kwh units	15,817,000	Kwh	
Kwh/Kva	29.34508		
Transition Charge	$0.91703	$/kva	
Peak	$1.92577	$/kva	
Off-Peak	$0.41267	$/kva	

Commonwealth Electric Company
Station Service for Canal Electric Plants
Development of the Facilities Cost of Power Paths
Alternative Case - Replacement Cost

Power Paths

Power path from receipt point of Canal Autotransformer 1
From tertiary winding of Auto1 @ 345kv/23kv through 23kv line to reserve station service transformer for Canal Unit 1

Power path from receipt point of Canal Autotransformer 2
From tertiary winding of Auto1 @ 345kv/23kv through 23kv line to reserve station service transformer for Canal Unit 2

Note: The two Power paths can be interconnected by closing a switch on a 23kv line interconnecting the two other 23kv lines. My understanding is the switch normally stays open.

Determination of Distribution Investment

Canal Unit #1 Tertiary Winding cost portion of Autotransformer 1 Investment

Based upon location property costs (Transformer identified as Serial No. 9751).

Total Autotransformer cost * (.5 * tertiary winding capacity) / (.5*tertiary winding capacity + secondary winding capacity)

$1,235,998 *(.5 * 106MVA) / (.5*106MVA + 400 MVA) =

$144,609

Canal Unit #2 Tertiary Winding cost portion of Autotransformer 2 Investment

Based upon estimated replacement cost for autotransformer from transmission planning

Total Autotransformer cost * (.5 * tertiary winding capacity) / (.5*tertiary winding capacity + secondary winding capacity)

$3,472,000 *(.5 * 106MVA) / (.5*106MVA + 400 MVA) =

$406,216

Distribution 23kv costs plus circuit breaker and switch costs

Based upon Plant Accounting Data provided by Accountanting

Distribution 23kv costs = 2411.44+2398+894 = $5,703.44

Two 34.5kv, 2000A (OCB) + One 25kv 1200 A (GCB) circuit breaker = $68,679

7 Disconnect switches = $14,012

Total Distribution 23kv costs = $88,394

Total Distribution Investment = $639,220

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